Husky Lloydminster Ethanol Project



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Husky Lloydminster Ethanol Plant





Ethanol Benefits

Environment

- produced from a renewable resource
- reduces air pollution
 - CO₂ emissions by up to 10%
 - carbon monoxide exhaust emissions by up to 20%
 - smog creating compounds by up to 15%

Economy

- supports agricultural grain-based economy
 - new market for local farmers
 - spring and winter wheat -yield/revenue benefits; lower crop risk
 - non-animal based livestock feed (DDGS)

Vehicle

- natural gas line antifreeze
- reduced vehicle emissions
- cleaner engine operation



Ethanol Production in Canada

Current Ethanol Production

The amount of ethanol produced in Canada, for all markets, is 62.9 million U.S. gallons, annually. The following table is a list of ethanol production plants currently in operation in Canada.

PRODUCER	LOCATION	CAPACITY (millions U.S. gallons/year)
Husky Oil	Minnedosa, MB	2.6
Pound-Maker Agventures, Ltd.	Lanigan, SK	3.2
Commercial Alcohols, Inc.	Tiverton, ON	6.1
Commercial Alcohols, Inc.	Chatham, ON	39.6
Permolex	Red Deer, AB	6.9
Tembec	Temiscaming, PQ	4.5
TOTAL		62.9
Husky Project	Lloydminster, SK	34.3



Lloydminster Proposed Facility

- 34.3 million U.S gallons per year fuel grade ethanol production facility integrated with Upgrader and Cogen
- 386,000 tons per year of grain feedstock required
- 148,000 tons per year of distillers dried grain with solubles
- 40 to 60 person years of engineering during design and construction
- over 200 person years of employment during construction
- 26 full-time permanent positions will be created
- Received \$7.8 million (Cdn.) in funding under National Resources Canada's Ethanol Expansion Program



Block Process Diagram



Canadian Prairie Spring Wheat - 386,000 tons/year Lloydminster Area



Milling/ Mashing /Cooking Enzymes + Yeast

Liquefaction/ Fermentation



Ethanol

34.3 million U.S.

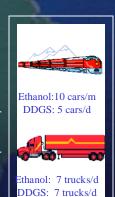
gallons/year

Waste Heat from HLU/Cogen



Ethanol Sask/AB/ Export

DDGS West. Canada, West. US Dairy/livestock industry



Ethanol Storage

DDGS Storage Distillation/ Dehydration/ Evaporation

DDGS 148,000 tons/year









Construction Site





Husky Ethanol Plant Project CONTACTS

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